

about a device axis that is fixed relative to the moveable device, as recited in new claim 24, which is now new claim 23. The Examiners agreed that Yamagishi was deficient in this manner.

Details of the arguments presented during the interview and a discussion of Yamagishi's toy robot are incorporated into the REMARKS that follow.

REMARKS

Applicant thanks Examiner Cegielnik for the indication that claims 6 and 7 recite allowable subject matter. Applicant also thanks Examiners Cegielnik and Banks for the indication that new claims 17-25 are allowable over Yamagishi.

Claims 1, 2, 4, and 6-25 are pending with claims 1, 13, 18, 20, and 23 being independent. Claims 17-25 are newly presented. Support for these new claims can be found in the specification at least at the following locations:

- Claim 17: Page 5, lines 18-19; page 6, lines 1-9; and page 7, lines 1-2.
- Claim 18: Originally filed claims 1 and 6.
- Claim 19: Originally filed claim 7.
- Claim 20: Page 2, line 31 to page 3, line 20; page 5, line 6 to page 6, line 9; and Figs. 4-9.
- Claim 21: Page 1, lines 13-14.
- Claim 22: Page 1, lines 13-14.
- Claim 23: Page 2, line 31 to page 3, line 20; page 5, line 6 to page 6, line 9; page 7, lines 1-2; and Figs. 4-9.
- Claim 24: Page 2, line 6.
- Claim 25: Page 1, lines 13-14.

No new matter has been added.

Claims 1-5 and 8-16 stand rejected as being anticipated by Yamagishi. Applicant requests withdrawal of this rejection because Yamagishi fails to describe or suggest rotation of a lever mounted to a drive shaft about a drive axis that is fixed relative to a toy body, as recited in claims 1 and 13.

Yamagishi relates to a pet robot 1 having a tail 5 connected to a body member 2 of the robot 1. See Yamagishi at col. 4, lines 35-46 and Fig. 23. The tail 5 includes a curving

mechanism 21 attached to a spherical gear box 23 coupled to the body member 2. See Yamagishi at col. 5, lines 19-39 and Figs. 1 and 2. The gear box 23 houses a differential gear mechanism 38, which is driven by motors 52 and 53. See Yamagishi at col. 9, lines 8-30 and Figs. 7-11. In general, the differential gear mechanism 38 drives the curving mechanism 21 about an X axis and a Y axis. See Yamagishi at col. 6, lines 32-58; col. 9, lines 8-30; and Figs. 7-11 and 15.

The gear box 23 is supported by vertical support shafts 34 and 35 that are mounted to a chassis 33 and a horizontal support shaft 39 that is supported by the gear box 23. See Yamagishi at col. 8, lines 25-40 and 45-53 and Fig. 10. The differential gear mechanism 38 includes third and fourth gears 43 and 44 that are attached to the support shafts 34 and 35, respectively, and first and second gears 41 and 42 that are rotatably attached to the ends of support shaft 39. See Yamagishi at col. 8, lines 53-65 and Fig. 10. Teeth of the first and second gears 41 and 42 mate with teeth of the third and fourth gears 43 and 44. See Yamagishi at col. 8, lines 63-65 and Fig. 10.

The differential gear mechanism 38 includes a slide guide 62 and a pair of sliders 63 and 64 built between first and second gears 41 and 42 and rotatably attached to the support shaft 39. See Yamagishi at col. 9, lines 31-67 and Figs. 10, and 15-17. The sliders 63 and 64 are connected to driven ends, respectively, 24d and 24e of a wire 24 within the curving mechanism 21.

The third and fourth gears 43 and 44 are rotated about the Y axis by gears within the differential gear mechanism 38 when the motors 52 and 53 are actuated. See Yamagishi at col. 10, lines 31-50 and Figs. 10 and 15-17. As the third and fourth gears 43 and 44 rotate, the support shafts 34 and 35, which are attached to the third and fourth gears 43 and 44, also rotate about the Y axis, thus causing the gear box 23 and the curving mechanism 21 to rotate about the Y axis. See Yamagishi at col. 8, lines 58-65 and Figs. 2 and 10.

Moreover, as the third and fourth gears 43 and 44 rotate, teeth of the third and fourth gears 43 and 44 turn the teeth of the first and second gears 41 and 42, thus causing the first and second gears 41 and 42 to rotate about the X axis. See Yamagishi at col. 10, lines 31-41 and Fig.

10. As the first and second gears 41 and 42 rotate about the X axis, the curving mechanism 21 rotates about the X axis. See Yamagishi at col. 10, lines 31-50 and Figs. 1 and 10. After the curving mechanism 21 engages an upper stopper 71, the sliders 63 and 64 then reciprocally translate, and the wire 24 is bent to curve the curving mechanism 21 in the directions of arrows a1' and a2'. See Yamagishi at col. 11, line 53 to col. 12, line 62 and Fig. 1.

Though Yamagishi's sliders 63 and 64 are connected to the wire 24 of the curving mechanism 21, the sliders 63 and 64 are not mounted to support shaft 34 or 35, which is the only shaft that is fixed relative to the body member 2 of Yamagishi's robot 1. Rather, as Yamagishi explains, the sliders 63 and 64 are secured between the first gear 41 and the slide guide 62, which is "rotatably attached to an outer circumference of the support shaft 39." See Yamagishi at col. 9, lines 36-44 and Fig. 10. Thus, the sliders 63 and 64 are mounted to the slide guide 62, which is mounted to a shaft that is moveable relative to the body member 2 of Yamagishi's robot 1.

Thus, Yamagishi fails to describe or suggest rotation of a lever mounted to a drive shaft about a drive axis that is fixed relative to a toy body, as recited in claims 1 and 13. For at least this reason, claims 1 and 13 are allowable over Yamagishi.

Claims 2, 4, 8-12, and 14-16 depend from claims 1 or 13 and are allowable for at least the reasons that claims 1 and 13 are allowable.

New claim 17 depends from claim 13 and is allowable for at least the reasons that claim 13 is allowable.

New independent claim 18 recites an apparatus for a moving a toy appendage. The apparatus includes a moveable device within a toy appendage that is attached to a body of a toy, and an actuator coupled to the moveable device. The moveable device includes a flexible strip, a plate transversely connected to the flexible strip and positioned within a first portion of the moveable device, and an elongated device that intersects the plate. The actuator rotates the moveable device about a drive axis. The actuator is coupled to the at least first portion of the moveable device to rotate the at least first portion of the moveable device relative to at least a second portion of the moveable device about a device axis that is fixed relative to the moveable device. As discussed during the interview, Yamagishi fails to describe or suggest at least one or

more features of claim 18. Accordingly, applicant requests allowance of claim 18 and claim 19, which depends from claim 18.

New independent claim 20 recites an apparatus for moving an appendage of a toy. The apparatus includes a moveable device within a toy appendage that is attached to a body of the toy, and an actuator including a motor having a drive shaft configured to rotate about a drive axis. The actuator is connected to the moveable device such that as the drive shaft rotates about the drive axis, the actuator causes the moveable device to rotate about an axis that is parallel with the drive axis and causes at least a first portion of the moveable device to rotate relative to at least a second portion of the moveable device about a device axis that is fixed relative to the moveable device. As discussed during the interview, Yamagishi fails to describe or suggest at least one or more features of claim 20. Accordingly, applicant requests allowance of claim 20 and claims 21 and 22, which depend from claim 20.

New independent claim 23 recites an apparatus for moving an appendage of a toy. The apparatus includes a moveable device within a toy appendage of the toy, and an actuation system coupled to a motor and to the moveable device. The actuation system is constrained to rotate about a single drive axis such that the actuation system causes the moveable device to rotate about an axis that is parallel with the drive axis and causes at least a first portion of the moveable device to rotate relative to at least a second portion of the moveable device about a device axis that is fixed relative to the moveable device. As discussed during the interview, Yamagishi fails to describe or suggest at least one or more features of claim 23. Accordingly, applicant requests allowance of claim 23 and claims 24 and 24, which depend from claim 23.

Applicant : Richard Maddocks et al.
Serial No. : 10/073,122
Filed : February 12, 2002
Page : 12 of 12

Docket No.: 06181-911001

Enclosed are a \$226.00 check for excess claim fees and a \$420.00 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: January 27, 2004

Diana DiBerardino
Diana DiBerardino
Reg. No. 45,653

Fish & Richardson P.C.
1425 K Street, N.W.
11th Floor
Washington, DC 20005-3500
Telephone: (202) 783-5070
Facsimile: (202) 783-2331

40188862.doc